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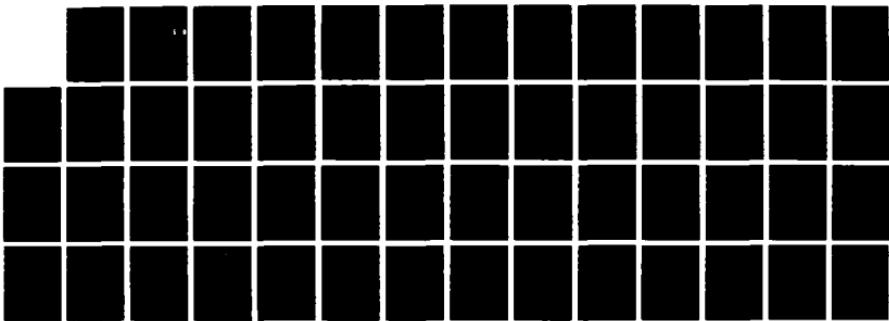
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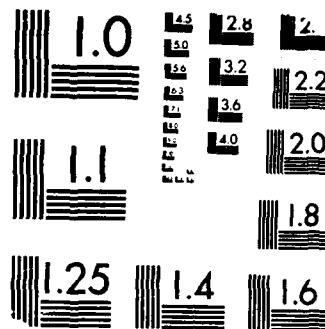
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**The Principles of War and Rear Area Protection:  
Have We Achieved Economy of Force?**

by

Lieutenant Colonel Thomas A. Hooper  
U.S. Army

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Advanced Operational Studies Fellowship  
School of Advanced Military Studies  
U. S. Army Command and General Staff College  
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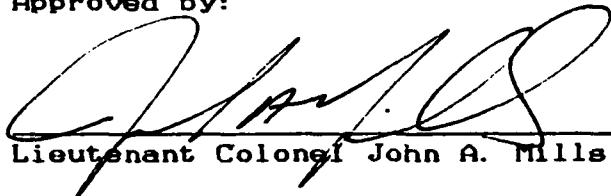
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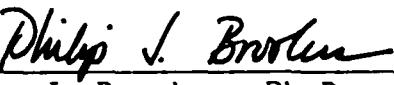


Lieutenant Colonel John A. Mills, M.S.

Monograph Director

  
Colonel L. D. Holder, M.A.

Director, School of  
Advanced Military Studies

  
Philip J. Brookes, Ph.D.

Director, Graduate Degree  
Programs

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ABSTRACT

THE PRINCIPLES OF WAR AND REAR AREA PROTECTION; HAVE WE ACHIEVED ECONOMY OF FORCE? by Lieutenant Colonel Thomas A. Hooper, USA, 48 pages.

This monograph examines the rear battle to determine if current self-defense doctrine is consistent with the tenets of AirLand Battle and the principles of war. It investigates the importance successful defense has on both the tactical and operational missions assigned to the total force, analyses current self-defense doctrine, and examines alternatives which might enhance operations in the rear area.

The analysis shows that current doctrine is inconsistent with the tenets of AirLand Battle and the principle of war. Changes are needed to optimize self-defense capability. It also reinforces the need to look at rear operations as one of three components of the total battle and recognizes that rear operations are critical to success in the close and deep battles.

## TABLE OF CONTENTS

I. The Question.....	1
II. The Battlefield.....	2
III. The Rear Area.....	6
IV. The Doctrine.....	12
V. The Analysis.....	20
VI. The Conclusions.....	38

### **Figures:**

1. The Principles of War.....	4
2. Typical Perimeter Defense.....	15
3. Threat Matrix.....	20
4. Strong Point Defense.....	32

<b>Endnotes.....</b>	<b>41</b>
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<b>Bibliography.....</b>	<b>45</b>
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## I. THE QUESTION

Battle is a serious business. It requires careful, continuous study if success is to be achieved with the least cost in both material and human resources. Success for the U. S. Army requires that " ... every weapon system, asset, and combat multiplier be used" and that planning "optimize the use of all available combat, combat support, and combat service support forces."<sup>1</sup> The Army must focus on achieving those goals.

This paper investigates one component of battle to determine if we have, in fact, optimized the use of our forces. It looks at the self-defense role assigned to units located in the rear area to determine if the procedures they follow are consistent with the tenets of success on the battlefield and the principles of war. It investigates the importance of successful self-defense on both the tactical and operational missions assigned to the total force and it discusses alternatives to see if procedural changes could alter the potential outcome of battle, if it should occur.

Analysis will determine if current self-defense procedures are adequate for the units which execute them, consistent with the tenets of AirLand Battle and the principles of war, and, supportive of tactical and operational missions. If the answers indicate the procedures are inadequate, inconsistent, or non-supportive, our doctrine must change.

## II. THE BATTLEFIELD

The battlefield of the future will be lethal, destructive, and highly demanding. The combined effects of technologically advanced weapons systems, multi-dimensional combat, nonlinear operations, geographic dispersion, and decreased reaction time demands professionalism of the highest order. All combatants will employ weapons of increased range, accuracy, and lethality. Combat will occur in all dimensions -- ground, air, sea, and space -- and over great distances. The battlefield will be nonlinear. The threat in the rear area will impact on already austere support and contribute to panic among civilian populaces. Sensors and communications systems will identify potential targets rapidly and allow attack quickly and accurately. Chemical, biological, and nuclear warfare will increase war's destructiveness and magnify battlefield stress. Commanders will have limited time to analyse situations or transmit orders.\* In short, the pace, intensity, and complexity of the next battlefield will be tremendous.

Battlefield activities, comprised of synchronized air and ground actions, will consist of three distinct but interrelated battles. These activities, different at each level of organization, are described as deep, close, and rear operations. Deep operations are conducted against enemy forces not yet in direct contact with friendly elements. Operationally, they isolate the current battle and influence the time, place, and

terms of future battles. Tactically, they shape the battlefield to ensure advantages in follow-on engagements. Close operations are actions between forces in direct contact. Both operationally and tactically, close operations often include maneuver, close combat, indirect fires, sustainment, and command and control actions needed for the immediate battle. Rear operations are conducted in the rear of forces in contact. They ensure forces are free to maneuver and capable of continued operations through sustainment and effective command and control. Operationally, they concentrate on future operations. Tactically, they ensure the close-in fight is supported and that resources are available to quickly exploit any opportunities.<sup>3</sup>

The U.S. Army's reaction to the anticipated battlefield is an emphasis on the combination of maneuver, firepower, protection, and leadership to produce effective combat power.<sup>4</sup> Friendly forces interfere with the production of the enemy's combat power while limiting his ability to degrade their own. If successful, the result is victory. Success, both operationally and tactically, requires the commander change potential force into actual capability "through violent and coordinated action concentrated at the decisive time and place."<sup>5</sup>

The "violent and coordinated action" needed for victory is achieved through the proper application of four basic tenets -- initiative, agility, depth, and synchronization. These tenets serve as a framework for the generation and application of

combat power needed for both operational and tactical success. Initiative implies an offensive spirit combined with a willingness to act independently to achieve the higher commander's goals. Agility, a requisite for initiative, demands friendly forces act quicker than the enemy in order to disrupt his operations before they have a decisive effect. Depth extends "operations in space, time, and resources" and provides maneuver room, planning time, and concentration of resources. Synchronization allows friendly forces to "produce maximum relative combat power at the decisive point" by "arrangement of battlefield time, space, and purpose."<sup>6</sup>

The four tenets are consistent with the U.S. Army's recognition of nine principles of war. Defined in Figure 1, the principles are objective, offensive, mass, economy of force, maneuver, unity of command, security, surprise, and simplicity. The proper application of these principles is required for victory. Armies which ignore them will not be successful on the demanding battlefields of the future.

The principles, when coupled with the four tenets of battle and arrayed against a potential threat, provide structure for the analysis of operational and tactical doctrine.

<b>Principles of War</b>
<b>Objective:</b> Direct every military operation towards a clearly defined, decisive, and attainable objective.

<b>Offensive:</b> Seize, retain, and exploit the initiative.
<b>Mass:</b> Concentrate combat power at the decisive place and time.
<b>Economy of Force:</b> Allocate minimum essential combat power to secondary efforts.
<b>Maneuver:</b> Place the enemy in a position of disadvantage through the flexible application of combat power.
<b>Unity of Command:</b> For every objective, ensure unity of effort under one responsible commander.
<b>Security:</b> Never permit the enemy to acquire an unexpected advantage.
<b>Surprise:</b> Strike the enemy at a time or place, or in a manner, for which he is unprepared.
<b>Simplicity:</b> Prepare clear, uncomplicated plans and clear, concise orders to ensure thorough understanding.

Figure 1, The Principles of War<sup>7</sup>

The battlefield, then, will be a lethal environment where success will demand the proper application of recognized principles and the mastery of four battle tenets. With that discussion as a backdrop, the focus can now narrow to the rear area and the operations expected there.

### III. THE REAR AREA

The rear area, as defined in Field Manual 90-14, Rear Battle, "begins at the rear of the main battle area and extends through the communications zone."<sup>8</sup> As discussed earlier, operations in the friendly rear area are conducted in an attempt to ensure forces can maneuver and maintain continued operations.

Units located in the rear contribute to these goals. They consist of a combination of command and control, combat, combat support, and combat service support units. These units may be either assigned to the rear area or passing through it. Combat forces are located in the rear area either because the threat demands their presence or because they are preparing for commitment to the close or deep battle. Combat support and combat service support organizations support other units located in the rear, forces involved in close and deep operations, or both. Each of the units has a different technical mission, but the common denominator for all units in the rear area is the requirement -- within established capabilities -- to defend themselves.

That self-defense capability varies enormously from unit to unit. It is dependent on the threat they face, weapons assigned, training received, doctrine prescribed, support available, psychological preparation, and task organization. Maneuver forces are, by virtue of their close combat missions,

organized with inherent self-protection capability. Combat support, combat service support, and command and control forces are organized to accomplish their technical missions and their self-defense capability is therefore limited.

These self-defense limitations pose a dilemma for the U.S. Army. Two alternatives are possible. The U.S. Army can either commit combat forces to rear area protection missions routinely or accept the risks inherent in calling combat units back to the rear when a threat arises.

The U.S. Army has chosen the second course of action and that, by definition, means that rear operations are economy of force operations. Economy of force implies the acceptance of risk in selected areas in order to achieve superiority in areas where a decision is expected.<sup>9</sup> The U.S. Army recognizes that while the battle could be lost in the rear, it cannot be won solely by operations there.<sup>10</sup> Force structure limitations and potential enemy capabilities demand that the risk be accepted.

Risk is inherent in war. Accepting risk in the rear, although consistent with an economy of force mission, is, of course, undesirable. Tactically, the forces in the rear are critical to support of the current battle. They provide command and control, reinforcement, and sustainment. Operationally, they allow the sequencing, agility, and synchronization needed for initiative and depth in the conduct of campaigns and major operations.

Doctrine accepts risk as necessary in the rear. A key to

reducing risk is self-protection. Protection is a critical component of combat power. It changes "potential force into actual capability." Protection counteracts enemy "firepower and maneuver by making soldiers, systems, and units difficult to locate, strike, and destroy" and securing "equipment and supplies from loss or damage."<sup>11</sup> It follows then, that the methods used for protection are critical to the generation of combat power and the tactical and operational success of the force. Combat power in the rear area is generated through adequate planning, properly equipped and trained forces, effective command and control, and soldiers mentally prepared to face a determined enemy.

Protection must be achieved against a range of formidable threats. The most dangerous potential antagonist is the Soviet Union. Its military doctrine demands a favorable correlation of forces achieved through a combination of material and moral factors. Its operational and tactical principles are offensive in nature and demand mobile combined arms units capable of rapid movement, continuous operation, and violent execution.<sup>12</sup> The Soviet Union's force structure and doctrine is designed to support its tactical principles along the entire spectrum of combat. Opponents can expect intense operations consistent with that doctrine during deep, close, and rear operations.<sup>13</sup>

The friendly rear area threat is particularly significant because of the number of options available to the enemy and the nature of the operations conducted in the rear. Soviet forces

will disrupt friendly rear operations through a combination of attacks conducted by a variety of forces and weapon systems. Attacks will be directed against friendly command and control, communications, sustainment, reserve, and reinforcement capabilities. They may be conducted by conventional or special operations forces airdropped, airlanded, or air-assaulted into the rear; long-term sleeper agents or guerrilla forces activated in the area; amphibious forces inserted along coast lines; aircraft, rocket, missile, and long-range artillery; or operational maneuver groups which have penetrated into the rear area.<sup>14</sup>

U.S. Army doctrine identifies these threats by level of intensity. It specifies three levels of threat. Level I includes enemy agents, sabotage, and terrorism. Level II is comprised of special operations, unconventional warfare, raids, ambushes, and reconnaissance operations conducted by units less than battalion-sized. Level III, the most intense threat, includes heliborne, airborne, amphibious, and ground attacks or infiltration conducted by battalion-sized or larger forces. These operations may or may not be interrelated. They may be sequential or concurrent.<sup>15</sup> The attacks may occur in a radio-electronic, chemical, or nuclear environment.

The rear area is crucial to the operational and tactical success of the force. Two examples clearly illustrate the operational and tactical impact self-defense failures can have.

The Soviets claim that during World War II, partisan

operations against German forces on the Eastern Front resulted in over 300,000 dead Germans and the destruction of 1191 armored vehicles, 476 airplanes, 378 guns, 4,000 trucks, 895 supply depots, and thousands of rail and road bridges.<sup>16</sup> One source reports that by 1942 fifteen German divisions were committed to protection operations in the rear and by 1943 that figure had risen to twenty-five.<sup>17</sup> While it is clear German operations were not stopped by that diversion, it must also be clear that the commitment of about ten percent of the army's strength to rear area protection missions and the destruction of their materiel and transportation resources must have had some impact on both the tactical and operational agility of the German forces.

A more recent example further highlights the impact rear operations have on the operational and tactical levels of war. Mujahideen operations in Afghanistan have resulted in both the significant loss of resources and the commitment of large numbers of Soviet and Afghan Army combat forces to rear area protection operations. Mujahideen attacks on lines of communication and logistical units have, as a minimum, diverted combat forces from their more traditional close combat roles and forced the Soviets to rethink their rear area operations doctrine.<sup>18</sup>

These examples plainly portray the impact rear area operations can have on the resources available for the close and deep battles and reinforce the importance of adequate

self-defense doctrine. The diversion of combat forces could mean the difference between operational success or failure.

Units operating in the rear area must not only accomplish their technical missions, they must maximize their self-defense capability if they are to limit the need for combat forces to protect them or their facilities. The rear area's economy of force role demands the success of both missions. Since command and control, combat support, and combat service support units are organized and equipped to accomplish the technical, rather than the self-defense mission, it is important that self-defense doctrine be carefully evaluated to ensure it maximizes limited inherent self-defense capability. If that self-defense capability is not maximized, both the operational and tactical missions of the total force will suffer.

IV. THE DOCTRINE

Current doctrine states that the keys to the defeat of enemy forces in the rear are effective command and control relationships, command supervision, reliable communications, accurate intelligence, centralized planning, decentralized execution, rear battle force mobility, training, rehearsals, and prior assessment of self-defense capability.<sup>20</sup> To accomplish these "key" tasks, the U.S. Army has established a unique command and control system, categorized levels of threat, specified self-defense measures, and outlined training requirements.

At the lowest level, units are either assigned to an existing base or establish a new base. Bases are grouped into clusters for mutual support and reaction forces are organized to respond to threats at each base or base cluster. Bases are expected to establish a viable defensive perimeter and base commanders are tasked to train and rehearse personnel in basic defense techniques. Operations centers are established to ensure twenty-four hour a day operations in support of the tactical chain of command. Coordination is performed to ensure mutual support, communications interface, fire support, and integration of response forces. Bases defeat level I threats and contain level II and level III threats until response forces -- military police or tactical combat forces -- arrive.<sup>21</sup>

The command and control system which fights the rear battle

is unique. At the lowest level, it depends on detachment, company, and battalion commanders of units located in the rear. They are expected to establish a perimeter defense, defend themselves, and perform their technical missions. To assist in this function, a series of specialized rear battle organizations have been organized. Base Defense Liaison Teams (BDLT) coordinate base defense and conduct liaison between headquarters. The BDLT are assigned to Rear Area Operations Centers or RAOC. The RAOC are organized at division, corps support group, corps, area support group, theater army area command, and theater army levels. They coordinate, advise, and execute the rear battle.<sup>22</sup> They are separate from, and by design complementary to, the technical chain of command. They accomplish their missions under the control of a Rear Battle Officer appointed by the responsible commander to supervise the battle.<sup>23</sup> Rear Battle Officers may be commanders, deputy commanders, or staff officers of tactical, support, or service support forces.

The doctrine recognizes the need for units to conduct their own self-defense; to be reinforced when the threat exceeds their local capability; and to be controlled by a central authority. Its effectiveness is, however, the real crux of the issue. If the doctrine cannot be properly implemented, then the actual risk in the rear is hidden.

Hidden risk -- ineffective doctrine -- took its toll in France during the German Blitzkrieg in World War II. The

French did not recognize the threat they faced or take the actions needed to counter it.<sup>24</sup> The U.S. Army knows the threat to the rear area, and, while a failure in the rear may not immediately result in a lost war, it will certainly divert needed resources from the close and deep battles. It is necessary, then, to apply the rear battle doctrine to the realities of war if its effectiveness is to be judged. That analysis must look at both the self-defense methods practiced by base and base cluster commanders and the command and control procedures established to fight the rear battle.

The umbrella doctrine directs bases be organized into a perimeter defense.<sup>25</sup> Implementing doctrine for units habitually located in the rear is remarkably vague about how to accomplish this critical mission,<sup>26</sup> but it generally is translated on the ground into a "goose egg" similar to Figure 2. Unfortunately, one of two things generally result when the "goose egg" is laid on the ground. Either the perimeter is too small and the equipment is extremely vulnerable to air or artillery attacks or the perimeter is too large and a ground attack can easily penetrate it and destroy equipment or flank individual positions. Figure 2 illustrates this point. An enemy ground attack is countered by fire from few defense positions and, if the perimeter is penetrated, it has no depth.

The organizational structure of the majority of units in the rear area is based on their technical missions, not their self-defense requirements. The equipment needed for critical

technical functions must be dispersed or it will be destroyed. There are, however, too few soldiers to defend adequately a perimeter large enough to hold properly dispersed trucks, tents, vans, generators, and supplies normally present in a rear area unit.

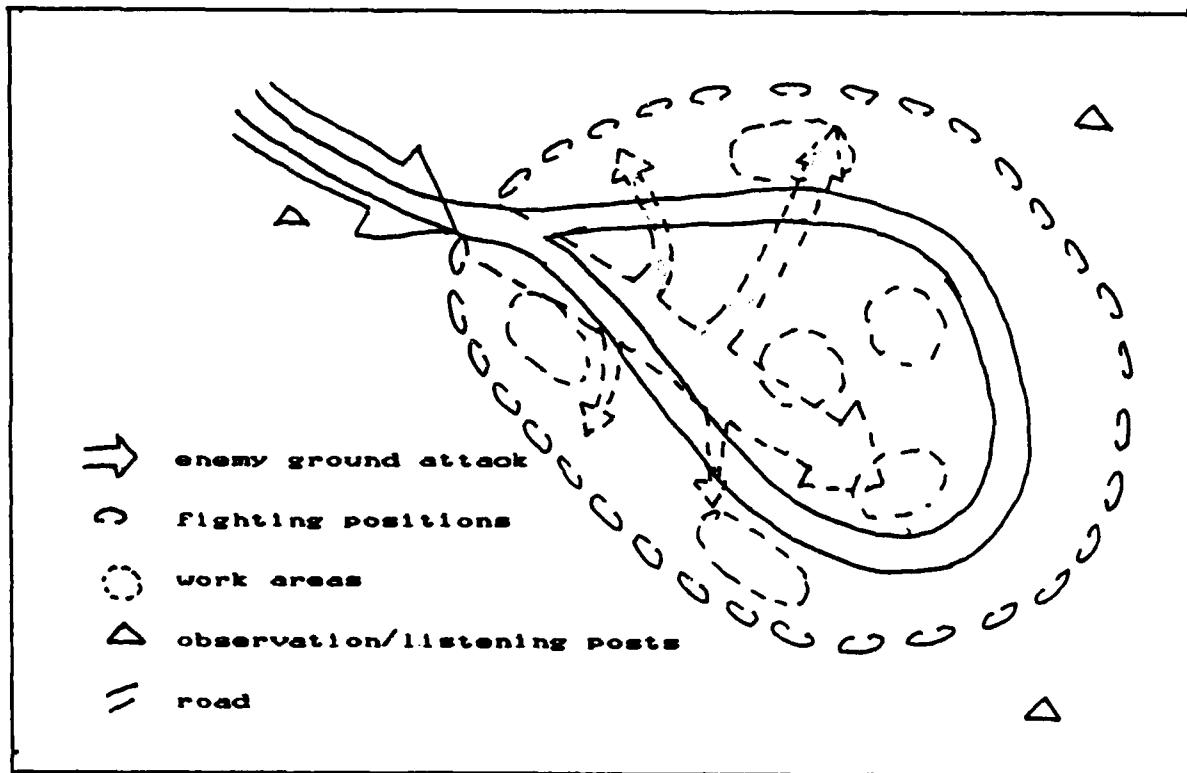


Figure 2, Typical Perimeter Defense

Effective perimeter defense becomes even more difficult when technical mission requirements are factored into the equation. If enough soldiers are dedicated to man a perimeter effectively, the technical mission suffers significant degradation. Therefore, most units establish very limited early-warning systems and man the perimeter "on-call." Soldiers

must leave their work areas and run to their positions after the fighting starts. Routinely, that means a run of 100-500 meters while under at least small-arms or indirect weapons fire. Many will never get to prepared positions. The perimeter will be penetrated before they can get there or they will be hit before they reach it.

Furthermore, most of the units in the rear will not have all their soldiers available to man the perimeter during an attack. Technical missions require sub-elements to operate away from the base for extended periods. An example should illustrates this point. A truck company establishes a perimeter, then sends its squads and platoons away from the base to accomplish their technical missions. Those missions require constant movement into and out of the base. To be effective, the perimeter would have to expand and contract as sub-elements departed or returned. Given the time necessary to establish all these fighting positions and the need to move on a regular basis, the units cannot accomplish both their self-defense and technical missions. While a truck company was used as an illustration, the same is true for almost all rear area units. Engineer, signal, maintenance, military police, headquarters, and many others, all send significant portions of their total strength away from their bases in order to accomplish their technical missions.

An additional problem is training. The leaders who establish the perimeter and the soldiers who man it are not

well trained in the tactical aspects of their jobs. Most support personnel receive little training in combat skills. Their training is concentrated on the technical aspects of their specialities. The tactical training they do receive is limited in scope and frequency.

Limited training, coupled with technical mission requirements, often results in poorly constructed fighting positions spaced to conform to the vision of the perimeter "goose egg" rather than to the terrain they occupy. The positions habitually do not provide mutual support and can seldom respond to an attack from more than one direction. Psychologically, the troops who man the perimeter are not prepared for surprises. They tend to believe an attack is possible from only one direction and that penetrations will be quickly dealt with by a reaction force comprised of their peers who lack the close combat skills, weapons, or communications needed to wage an aggressive counterattack. Early warning, key to the timely manning of the perimeter, is provided by other peers who man observation or listening posts. Little patrolling is accomplished. Seldom is the detailed coordination needed for successful use of reinforcing fires by helicopter gunships, artillery, or tactical air understood or accomplished.

The lack of realistic training means the discipline and psychological preparation needed for successful defense is missing. The techniques commonly understood in maneuver units are new to support forces. Camouflage, calls for fire,

obstacles, minefields, fields of fire, firing stakes, grenade sumps, and dead space, if not alien to support soldiers, are certainly not automatic. The soldiers also require constant supervision by the same leaders who oversee the unit's technical missions.<sup>27</sup>

Command and control in the rear area is exercised through dual chains of command: one technical, one tactical. The technical chain is responsible for the execution of the functional missions of subordinate units. The tactical chain supervises the execution of protection missions assigned to the functional units.<sup>28</sup> The technical chain's primary goal is to maximize the functional capability of their subordinate units. It is concerned with positioning forces to provide the most responsive support and workloading them to achieve maximum output. The tactical chain, while recognizing the importance of functional mission accomplishment, is oriented on the protection of forces and the defeat of enemy incursions into the rear area. Its emphasis is on the establishment of defendable bases and base clusters. These chains meet at the base and base cluster level. The result is often conflicting priorities.

For example, the technical chain wants units along good road nets and near airfields and similar organizations grouped to enhance technical operations. The tactical chain, on the other hand, wants the same units located away from good avenues of approach and potential landing zones and grouped to enhance over-all self-defense capability. These conflicts can only be

resolved at the top or the bottom of the chain. Either the base or base cluster commander makes his own decision or the conflict is elevated to the echelon commander who controls both the technical and tactical chains of command.

The rear area command and control system is further complicated by personnel, training, and equipment deficiencies. Bases and base clusters are expected to organize "ad hoc" operations centers. That requires dedicated personnel, adequate communications equipment, and tactical expertise. But, all organic personnel and communications equipment are needed to perform the unit's technical mission. Further, the tactical training and experience necessary for effective fire support planning, intelligence preparation, and tactical command is, at best, spotty. While the base and base cluster operations centers may be assisted by BDLT and RAOC personnel, they are created from resources found in functional units temporarily located at each base. Therefore, their composition will change as base composition changes. The only organizational source of tactical expertise is the BDLT and RAOC. They have a mix of combat and combat support arms, and communications equipment dedicated to the tactical demands of the rear battle. None are, however, in the active component. As reserve component forces, they have difficulty maintaining their tactical proficiency or participating routinely with the headquarters they would support in war.

V. THE ANALYSIS

Having described current doctrine and investigated its translation into practice, the next step is to determine the doctrine's effectiveness. Combat is, of course, the true arbiter of effectiveness and it is against the host of enemy threats that the evaluation of self-defense doctrine must be made.

To assist in that analysis, the doctrinal levels of threat intensity can be translated into three specific types of enemy activities or attacks which may be faced by units in the rear. The three types, and the self-defense measures available in response to them, are shown in Figure 3.

Type Attack	Defense Measure
Indirect Fire (aircraft, artillery, mortar, or rocket)	Early Warning Dispersion Concealment Protection Relocation
Small Unit Ground Attack (Squad or platoon-sized unconventional or conventional forces, snipers, saboteurs, terrorists, etc)	Early Warning Concealment Protection Reaction Forces Relocation
Large Unit Ground Attack (Company-sized or larger conventional maneuver forces)	Early Warning Concealment Relocation Reaction Forces Reinforcement

Figure 3, Threat Matrix 29

The probable result of enemy indirect fire is predictable

if the discussion of self-defense doctrine is accurate. If adequate warning is provided -- an unlikely occurrence given the communications and early warning systems available to most rear area units -- soldiers will have time to run to their positions on the perimeter and take cover. If prior warning is inadequate, soldiers will not take cover in time and the weapons effects on both personnel and equipment will be devastating. The German Infantry School verified this assessment in 1976. They fired artillery and mortars on field positions with the intensity specified by Soviet doctrine. The results were: one hundred percent casualties for soldiers prone in the open, thirty percent for those in trenches without overhead cover, and ten percent for those dug in with overhead cover.<sup>50</sup> The key to protection is a properly prepared position available immediately for every soldier. Unless positions are close enough for soldiers to get into them, they do no good against this type of attack.

The outlook for rear area units under ground attack by a superior enemy is not much better. Two examples, with and without warning, are considered, but the end results are similar in both.

In the first example, the early warning systems are timely and the perimeter is manned. The perimeter itself, however, normally consists of evenly spaced, two man fighting positions oriented to the outside. Enemy forces have the option of overwhelming one or more positions, or, if the positions are

spaced far enough apart, infiltrating elements through them. In either case, once penetration is achieved, the entire defense collapses. Other fighting positions are vulnerable to flank or rear attack and coordinated command and control ceases. The reconstitution of the perimeter depends on immediate reaction forces or reinforcement from outside the base. Most reaction forces are not equipped or trained to conduct aggressive counterattacks and reinforcements may not arrive in time to save the rear area unit. Perhaps most critical, however, is the psychological impact of the penetration.

Soldiers who have not been psychologically prepared for war react poorly to the stress associated with direct combat. If not properly prepared, they can break. One case should prove this point. Under the continuous attack of German forces in World War II, the French Ninth Army collapsed. The result was thousands of fugitives fleeing from combat. Most were physically capable of fighting, but had mentally given up.<sup>31</sup> Although this incident was the result of an Army's collapse, the point is equally valid at the base and base cluster level. On the other hand, properly prepared soldiers, psychologically ready for war, can react effectively to enemy actions. During operations on the Russian Front, the Germans were forced to use rear area soldiers to perform close combat duties. These units were often successful. In one case a German bakery company even stopped a tank penetration.<sup>32</sup>

The second example is a surprise attack. If surprised,

the unit will have no time to man the perimeter. Penetration is immediate and collapse of a coherent defense more probable. The end result, including the psychological impact of defeat, is the same.

Danger is increased if some elements of the friendly force are away from the base performing their technical missions when the attack occurs. If sub-elements are away from the base, one of three things will happen: portions of the perimeter will be unmanned, it will be weakened by the lack of its full complement of personnel, or the number of soldiers available for immediate reaction missions will be reduced.

So far, the ground attack discussion has centered on attacks by superior enemy forces, defined as forces capable of penetrating and destroying a friendly rear area unit. However, the enemy need not always destroy the friendly unit. Depending on his objectives, the destruction of equipment or the disruption of critical technical functions may spell success. To accomplish this mission, a numerically inferior enemy force which can infiltrate, create havoc, and withdraw is adequate. As outlined, current perimeter defense practices make that a realistic possibility.

The Army's current defense perimeter practices are analogous to the German experience at the Somme in 1916 and in Russia in 1941. At the Somme, the Germans attempted to hold their forward defense line by sheer density of personnel. Allied artillery attacks on that line were devastating. When a

penetration occurred as a result of that bombardment, few forces were available in the rear to counter it.<sup>33</sup> In Russia, the problem was slightly different, if no less difficult. Initially, they organized a linear defense. The distances involved, weakened condition of existing units, and overall shortages meant that the defense was "tissue-thin." Soviet attacks "completely overwhelmed this flimsy German defensive line, and those German units not destroyed outright were swept rearward."<sup>34</sup>

In both cases, the Germans lacked defensive depth. So does the U.S. Army's self-defense doctrine. The Germans recognized that deficiency and sought ways to eliminate it. The U.S. Army must do the same.

As a result of the Somme, the Germans developed an "elastic defense." That concept arrayed forces into three zones. Within the zones, squad and machine gun sections established fortified strongpoints. The strongpoints were capable of all around defense. They engaged the enemy, preferably with enfilade fire, even if cut-off and surrounded. Individual soldiers shifted from position to position to avoid concentrated artillery fire. Penetrations were handled by strong counterattack forces.<sup>35</sup> The adoption of this new doctrine demanded a significant revision of German tactical thought and extensive retraining. The Germans were successful and the new tactics proved much more effective than previous procedures.

On the Eastern Front, the failure of linear defenses forced

the Germans to adopt a strongpoint defense. Recognized as a tactic of weakness, it was dependent on the establishment of fortified strongpoints. The strongpoints, while they could not dominate all terrain, could provide coherent local self-protection and, if properly positioned, limited control over surrounding terrain. When possible, strongpoints were organized in a "checkerboard" pattern. That way "backup strongpoints guarded the gaps between advanced positions" and enemy penetrations were caught in a web of fire from multiple positions.<sup>36</sup> After the enemy was slowed or stopped by the strongpoint defense, he was counterattacked either by fire or reserve forces. As a method of generating more depth, units in the rear also adopted the strongpoint doctrine. All logistical installations were converted into strongpoints and manned primarily by supply and service personnel. These logistical strongpoints protected their installations, served as rallying points for personnel separated from their units, and prevented Soviet exploitation of breakthroughs.<sup>37</sup> While not totally successful, the strongpoint defense added depth to the battlefield and was certainly more realistic for the Germans than the linear defense had been.

The historical examples are unquestionably concerned with much larger issues than the simple defense of a base or base cluster. They do, however, illustrate a key point: defense in depth is critical to success. If depth is achieved, success is possible, if it is not, defeat is probable. In order for a

defensive line or perimeter to be effective, sufficient forces must be available to defeat any attempted penetration. Those forces will not be available to most base or base cluster commanders.

Analysis of rear area command and control arrangements reveals major deficiencies as well. The dual chain of command is confusing. Responsibilities are not clearly established. The technical chain controls some actions, the tactical chain others. Coordination must be accomplished with several agencies, staff officers, and units. Exactly who does what to whom and when it gets done is vague. The key commanders at base and base cluster levels must sort out conflicting priorities, coordinate competing requirements, establish effective defenses, accomplish technical missions, and do it all with the fewest command and control resources.

Having analysed self-defense doctrine by considering the likely results of enemy attacks, it can now be evaluated against more philosophic standards for the success of military operations. The tenets of battle and the principles of war defined in the second section of the paper provide another method of doctrinal analysis. If the doctrine is consistent with the tenets and principles, it should be effective. If it is not consistent, then the self-defense doctrine must be examined more closely to determine if changes are needed.

As previously discussed, the four tenets of AirLand Battle are initiative, agility, depth, and synchronization. Field

Manual 90-14, Rear Battle relates those tenets to the rear battle in this way:

Initiative - to aggressively deny the enemy landing areas, restrict access to critical bases, and ensure continuous support.

Agility - to anticipate and react to any rear battle threat by moving the necessary forces to meet and destroy the threat at any level throughout the width and depth of the rear area.

Depth - to ensure a distribution of support so the close-in fight is not dependent on only one facility or storage area to continue the fight. To plan for alternative support and be prepared to shift that support without interruption.

Synchronization - to sustain combat support and combat service support forward and to coordinate combat assets simultaneously to neutralize the rear battle threat without degradation of forward support.<sup>38</sup>

A comparison of these tenets to the doctrine prescribed or practiced reveals several inconsistencies. Each will be discussed in turn.

Using the field manual's definitions, it is clear that initiative is not consistent with practice. First, it is unlikely rear area units can deny the enemy potential landing areas. As the Germans found during World War II, "the great latitude which the airborne attacker enjoys in selecting his target makes it extremely difficult for the defender to take passive measures".<sup>39</sup> Second, current dependence on perimeter defense makes it improbable that bases or base clusters access

can be completely restricted. Third, and finally, continuous logistical support is not ensured if enemy activities are successful in the rear. Doctrine is not consistent with the tenet even in its broader Field Manual 100-5 definition. The command and control system and base concepts will do little to set or change "the terms of battle by action".<sup>40</sup>

Agility is the first requirement for initiative. Its key is an ability to act before enemy actions have a decisive effect on friendly operations.<sup>41</sup> If a successful defense cannot be mounted or adequate force applied against enemy incursions, agility is lost in the rear. Successful defense is doubtful and the application of adequate force against incursions is totally dependent on the threat faced and the quality, quantity, responsiveness, and availability of response forces. It appears that doctrinal consistency with this tenet is possible only if a coherent defense can be maintained. In other words, untenable defense equals lack of agility.

Depth, as defined in Field Manual 90-4, Rear Battle, has nothing to do with the rear battle. That definition is concerned with support to the close battle and how depth is achieved for the total force. The definition in Field Manual 100-5, Operations is more appropriate. It says "depth is the extension of operations in space, time, and resources."<sup>42</sup> Tactically, depth provides the resiliency needed for effective defense through redundant positions and responsive counterattack forces. Since current practices do not provide the depth

needed, it is clear doctrine is not consistent with this tenet.

Synchronization, the last of the tenets, is dependent on the coordination of multiple activities to produce maximum unity at the decisive point. Dual chains of command, conflicting functional requirements, and inherent training difficulties combine to make that coordination difficult.

Many of the same doctrinal problems which highlight inconsistencies with the tenets of battle also reveal doctrine's incompatibility with the principles of war. Almost without fail, doctrinal compliance with the principles receives low marks. The requirement for rear area units to split their energies between their technical and tactical missions violates the principle of "objective." As already discussed, "initiative" is ceded to the enemy. It is he who picks when, where, and how to attack. The economy of force mission limits the ability of units in the rear to "mass" combat power. Their location and configuration is determined more by the technical missions they perform than tactical considerations. The flexible application of combat power through "maneuver" is difficult given the organizational and mission limitations of rear area units. "Unity of Command" is violated by the dual chains of command and limited assets available in the rear. Clearly, the rear is dependent on well-trained units, early warning, and reaction forces if "security" is to be achieved. As currently practiced, any "surprise" achieved in the rear is likely to be enemy rather than friendly initiated. Complicated

command and control arrangements, combined with conflicts between technical and tactical missions, contradicts the principle of "simplicity." It is only in its "economy of force" role that the rear complies wholly with the principles of war. But, even in this area, problems exist. If current practices do not maximize self-defense capability, then the amount of minimum force needed for secondary efforts (rear area protection) will grow and "minimum" will not be "minimum" any longer.

It is clear from the analysis that effective self-defense is a multi-faceted, complicated, and difficult task. It demands knowledgeable leaders, well-trained units, adequate communications, effective weapons, and coordinated command and control. It also demands soldiers who are mentally prepared to wage war. The lack of any of these key elements spells defeat.

Having examined current doctrine and found it wanting, the obvious next step is to determine if changes might improve the chances of self-defense in the rear area. The remainder of this section will examine some potential areas where change may be warranted. It will concentrate on base defense and command and control procedures but touch on related training and equipment issues as well.

Base defense procedures are considered first. The German experience in two wars recognized that strongpoints added depth to the battlefield. They were forced into a strongpoint defense during World War II and recognized it as a "tactic of weakness."

They also recognized it was, with depleted resources, the best method available.<sup>44</sup> Its inherent strength was, however, recognized much earlier. Carl von Clausewitz discusses strongpoints and the need for depth in On War. He speaks of the possibility of inflicting "heavy losses on the enemy...as the attack passes through successive stages of resistance".<sup>45</sup> Even earlier, Sun Tzu, when discussing field fortifications, saw the benefits of strongpoints. He spoke of small forts at every crossroad and large camps comprised of small ones. His description of the results are clear:

... he may get in at the gates, but everywhere there are small camps, each firmly defended and to the east, west, north, or south he does not know where to attack.

... the officers and troops close the gates of the camps and man the fortifications and look down upon the enemy. Strong crossbows ... shoot in all directions.<sup>46</sup>

Given the economy of force role assigned in the rear, the training and equipment in rear area units, and the technical missions they must perform, it is unlikely units located there will ever be able to deal with enemy activities from a position of strength. They can, however, convert perimeter defenses into a series of "small forts."

A strongpoint defense by rear area units would make every work or sleep area a strongpoint manned by squad or section-sized forces. Each strongpoint would be oriented to the most likely avenue of approach, but be capable of all around defense. Ideally, each would be mutually supporting. Figure 4

shows what that defense might look like when implemented on the ground.

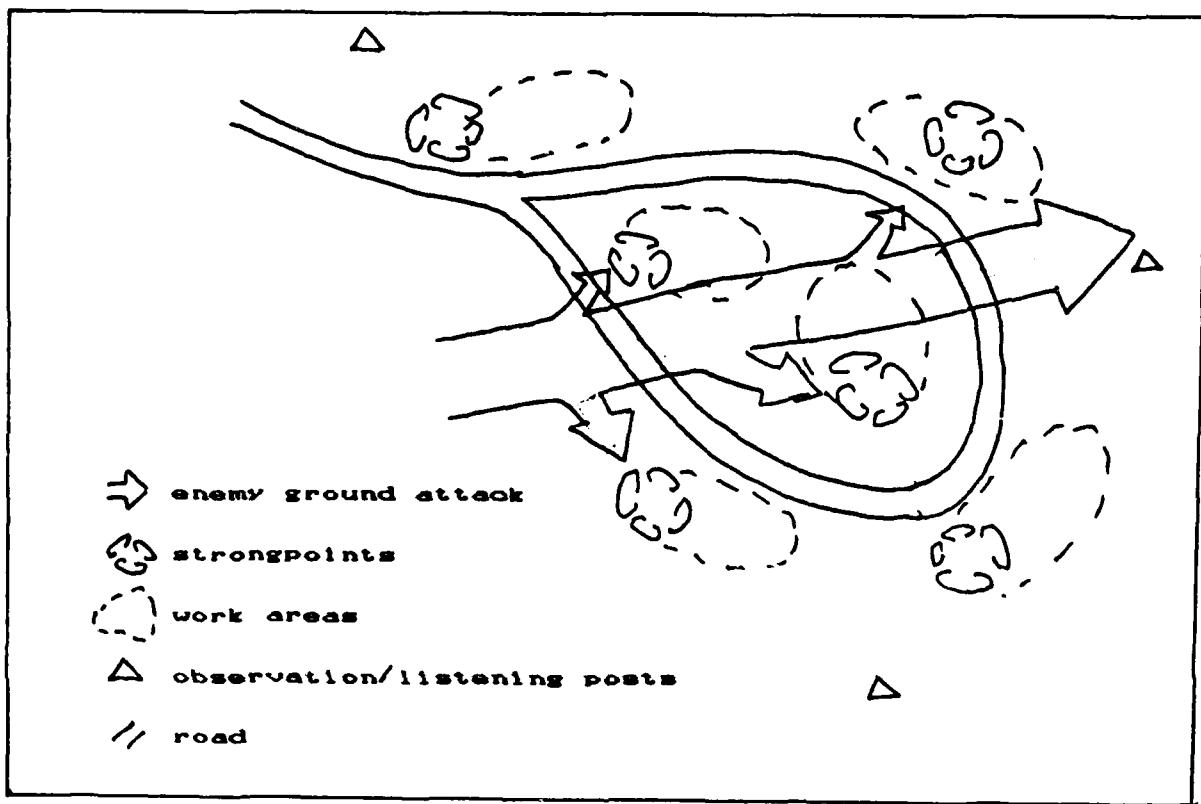


Figure 4, Strong Point Defense

By implementing a strongpoint defense, rear area units gain several advantages. First, the enemy cannot mass, destroy a single position, and gain complete freedom of movement on the flanks or rear of other positions. If a single strongpoint were destroyed, the defense would not collapse. The remainder of the unit would still be capable of defending the area. Second, the strongpoints are close enough to where soldiers actually work to

allow them to immediately occupy their positions if under air, artillery, or ground attack. Now most rear area units only prepare perimeter positions and these positions are too far away from the soldiers doing the unit's technical missions to provide critically needed immediate protection. Third, strongpoints in the work area reduce dependence on both early warning and troop availability. Under current doctrine, an effective defense requires two things: adequate early warning so the technical mission can be stopped and soldiers moved to their perimeter positions; and, enough soldiers in the unit to man each position. Rear area units seldom get adequate warning and habitually have a significant portion of their force away from the base on support missions. Under a strongpoint defense, positions are close enough for immediate protection and if a section is away from the base, the defense does not collapse. The enemy will still be engaged, just in a slightly different location. Realistically, this reduces the number of positions needed. The unit need not prepare perimeter positions which guard against ground attack and work positions which provide immediate protection from indirect fires. The strongpoints do both.

In effect, the defense becomes a large area ambush. Forces are canalized into the unit area and engaged from a series of strongpoints. The enemy bounces from one strongpoint to another until he dies, withdraws, or masses sufficient forces to overcome every position. Unfortunately, the killing zones

established between strongpoints may have critical equipment or supplies in them. That equipment and those supplies may be damaged or destroyed as the enemy is engaged. The same thing happens now if the perimeter is penetrated but under the strongpoint system the difference is significant. The strongpoint defense reduces risk to the most critical commodity -- people -- and it offers much greater odds that the enemy will, in fact, be destroyed or repulsed.

The advantages of having positions immediately available when under an indirect fire attack are clear. The strongpoint concept also increases a rear area unit's chances of survival against both small and large scale ground attacks. First, soldiers can get to their positions more quickly. That allows them to fight from prepared, rather than hasty, positions. Second, it is much harder to "crack" a strongpoint than roll over a relatively isolated position on the perimeter. Because of this, the strongpoints, at least some of them, are more likely to survive until help can arrive. Third, even if some strongpoints are not manned because sub-elements are away from the base, a coherent defense is maintained. Fourth, they allow more flexibility for the commitment of reaction forces. The strongpoints least engaged can organize and commit reaction forces from relatively secure bases. Fifth, soldiers in strongpoints are close enough to each other to provide mutual psychological support. They would not feel as isolated as is the case on a perimeter and they would benefit from the cohesion

offered by an identifiable, well-prepared, and strong position. Sixth, leaders, present in each strongpoint, would have better control. Less movement would be required to check soldiers, provide medical attention, redistribute ammunition or water, and better discipline could be maintained.

The strongpoint defense moves self-defense doctrine away from the Vietnam stereotype of bases capable of denying all enemy incursions. It is instead a doctrine where penetration is accepted in order to canalize the enemy into areas where mutually supporting positions, although relatively isolated, can deliver telling blows and protect their units in the process. Its success is unquestionably dependent on realistic training, knowledgeable leaders, and adequate equipment. So is current doctrine.

Training, especially in the preparation of fighting positions and the selection of strongpoint locations, is critical. Because of the need for each strongpoint, although oriented on a principle avenue of approach, to have an all around defense capability, leaders must be particularly knowledgeable in establishment of fields of fire and control measures if they are to prevent the fires from one strongpoint from hitting another. The need for these tactical skills is, of course, not new. Any self-defense doctrine demands tactical proficiency if it is to be successful.

The strongpoint defense should not create a greater need for weapons or communication equipment. Telephones or radios to

coordinate the battle and weapons to fight it are necessary under any defensive system. The Army has already recognized this need and is working to enhance rear area unit capabilities in this critical area.<sup>47</sup>

Another area where change might improve self-defense capability is in command and control procedures. Current procedures are inconsistent with the principles of both "simplicity" and "unity of effort". By forcing bases and base clusters to respond to two chains of command and establishing separate operations centers to deal with tactical issues, it confuses critical command and control relationships. A system is needed which clearly recognizes that tactical and technical missions are inseparably linked. Current procedures, which state that self-defense is a command responsibility, but execute it through appointed rear battle officers and separate operations centers are not the answer.

The Army recognized the need for tactical expertise in the rear area when it established Rear Area Operations Centers and Base Defense Liaison Teams. It recognized the importance of rear operations when it stated that the rear battle was a command responsibility. It now needs to recognize the principles of simplicity and unity of effort by insuring that rear battle operations are conducted by all commanders using their existing staffs and chains of command. The tactical expertise needed for successful rear battle operations needs to be organic to those commanders and staffs, not in a separate

organization. The resources in BDLT and RACO should be in existing organizations where they can help train units in peace and help defend them in war.

In short, commanders must be given the resources to accomplish the mission, then be held accountable for their actions. Every combat, combat support, and combat service support commander -- from company to army level -- must know he is responsible for rear area protection. Special organizations cannot do it for him. The rear battle is a component part of, and critically important to, the total fight. It deserves command attention.

The potential changes in base defense and command and control procedures are unquestionably not cure-alls. They do not eliminate the organizational deficiencies in personnel, communications equipment, or weapons inherent in many rear area units. Tough, realistic training is still needed for those units and all soldiers must achieve a minimum level of tactical proficiency. The changes proposed do, however, indicate more effective methods are possible. By doing so, they focus attention on the rear area fight, and that is the first step toward winning it.

## VI. THE CONCLUSIONS

Soldiers focus on war. Their profession demands they study it, learn from it, and, if required, wage it. They are paid to ensure success if their country goes to war. That success must be achieved at the least possible cost. This paper has investigated one component of war to see if the U.S. Army's self-defense doctrine does, in fact, wage war in the rear area at the least possible cost.

It has examined the battlefield of the future, considered potential enemies, described operations in the rear area, and, finally, critically analysed the doctrine for rear area self-defense. In doing that analysis, doctrine was poked, punched, and pulled. It was recorded for examination, translated into practice, evaluated against potential threats, appraised using military principles, and, finally, explored to determine if changes could make it more effective.

The analysis makes several broad conclusions possible. They are recorded below.

First, rear area operations must be treated with the importance they deserve. They are one of three components of battle. Commanders are responsible for each of their three battles; to ignore one is to risk failure in the others.

Second, rear area operations are critical to victory in the close and deep battles. The rear provides the freedom of maneuver, sustainment, and flexibility needed for both tactical

and operational success.

Third, the threat is significant and growing. Doctrine must be constantly evaluated against that threat to ensure it is adequate to defeat it.

Fourth, risk must be accepted in the rear. Rear area operations are, and should be, an economy of force mission. Given the potential threat, the close and deep fights require the maximum available combat power. Every effort must be made to ensure combat forces are committed to rear area protection missions only when absolutely necessary.

Fifth, the best way of limiting the need for combat forces is by maximizing rear area unit self-defense capability. That can be done through a combination of effective doctrine, capable command and control, adequate weapons systems and communications equipment, and realistic tactical training.

Sixth, current self-defense doctrine is inadequate. It does not support the tenets of battle or the principles of war. It also fails to maximize self-defense capability. Changes are needed in self-defense and command and control procedures. Additionally, Field Manual 90-14, Rear Battle requires revision. Furthermore, rear area units need a basic Field Manual which tells them "how-to" conduct a defense. Current manuals tell what to do, but not how to do it.

Seventh, and last, rear area units need additional weapons, communications equipment, tactical training, and personnel. Those issues are critical to any self-defense doctrine. Given

the threat, units must have the weapons to fight, the communications gear to coordinate the battle, the tactical training to organize an effective defense, and the personnel to put it all together.

As a final note, this paper has sought to increase awareness of and promote discussion on the critical nature of rear area operations. Although the result has been a harsh critique of self-defense doctrine and procedure, it was always intended to accomplish a single aim. That aim was to help the U.S. Army accomplish its most important mission -- To win the next war!

END NOTES

1. Department of the Army. Field Manual 100-5 Operations (Washington: U.S. Government Printing Office, 5 May 1986), pp. 27-28.
2. Ibid., pp. 2-4.
3. Ibid., pp. 19-21.
4. Ibid., p. 11.
5. Ibid., p. 12.
6. Ibid., pp. 14-17.
7. Ibid., pp. 173-177. Additional discussion on the U.S. Army's principles of war are contained in Field Manual 100-1, The Army (Department of the Army, Washington: U.S. Government Printing Office, 29 August 1986), pp. 14-17.
8. Department of the Army. Field Manual 90-14, Rear Battle (Washington: U.S. Government Printing Office, 10 June 1985), p. 2-1.
9. Department of the Army. Field Manual 100-5, p. 175.
10. Department of the Army. Field Manual 90-14, p. i.
11. Department of the Army. Field Manual 100-5, p. 13.
12. Department of the Army. Field Manual 100-2-1 The Soviet Army Operations and Tactics (Washington: U.S. Government Printing Office, 16 July 1984) pp. 2-1 to 2-4.
13. This point is made clear by two references. The Department of Defense's Soviet Military Power 1987 (Washington: U.S. Government Printing Office, March 1987) outlines current Soviet military capabilities. P.H. Vigor in Soviet Blitzkrieg Theory (New York: St. Martin's Press, Inc., 1983) used historical analysis to illustrate how that capability might be used to achieve a "quick victory".
14. See Department of the Army Field Manual 100-16 Support Operations: Echelons Above Corps (Washington: U.S. Government Printing Office, 16 April 1985) pp. 5-2 to 5-3 and Department of the Army, Field Manual 100-2-2 The Soviet Army Specialized Warfare and Rear Area Support (Washington: U.S. Government Printing Office, 16 July 1984) pp. 5-1 to 5-2 for a more thorough discussion of rear area threats. The potential

employment of Soviet special operations forces into the rear area is further enhanced by Soviet experience in Afghanistan. The effectiveness of Mujahedeen operations against the Soviet rear area is clearly documented by Graham H. Turbiville ("Ambush! The Road War in Afghanistan" Army, January, 1988, pp. 32-42.). That experience, coupled with the recent promotions of generals with Afghan and special operations experience to positions of national leadership in the Soviet Union (see Yossef Bodansky, "The New Generals in the Soviet High Command" Janes Defence Weekly, 31 October 1987, pp. 1010-1012.) would seem to indicate the potential for a greater, rather than lesser, Soviet interest in rear area operations.

15. Department of the Army. Field Manual 90-14, p. 1-2.

16. Robert B. Asprey, War in the Shadows. The Guerrilla in History (Garden City, New York: Doubleday and Company, Inc., 1975), p. 462.

17. Ibid. p. 463.

18. Graham H. Turbiville, Jr., "Ambush! The Road War in Afghanistan", Army, January, 1988, pp. 39-42.

19. Department of Defense, Joint Chiefs of Staff Publication Number 1. Department of Defense Dictionary of Military and Associated Terms (Washington: U.S. Government Printing Office, January, 1986) p. 118.

20. Department of the Army. Field Manual 90-14, p. 2-4.

21. Ibid. pp. 3-19 to 3-20.

22. Ibid. pp. 3-1 to 3-17.

23. Ibid. p. 3-1.

24. Robert Allen Doughty, The Seeds of Disaster: The Development of French Army Doctrine 1919-1939 (Hamden, Connecticut: Archon Books, 1985) p. 190.

25. Department of the Army. Field Manual 90-14, p. 3-19.

26. A review of various field manuals identifies a need to establish a perimeter defense, but gives very little "how-to". This void is particularly critical considering the limited tactical training combat support and service support leaders receive. The situation is exacerbated by a mental picture of Vietnam era "base camps" protected by dedicated combat arms soldiers.

27. This analysis is based in large part on the author's

experience as a support platoon leader (Battalion rear area), forward support maintenance company commander (Brigade rear area), main support maintenance company commander (Division rear area), and maintenance battalion commander (Corps rear area). As a training developer, the author wrote Army Training and Evaluation Programs (ARTEP) for maintenance units. As a battalion commander, he developed scenarios and administered ARTEP to maintenance, engineer, transportation, ammunition, and finance units.

28. Department of the Army. Field Manual 90-14. pp. 3-1 to 3-4.

29. This figure is based on the review of several sources which discuss the threat in the rear area and the author's experience as the commander of a combat service support battalion which had both combat support and combat service support units attached to it.

30. John A. English, On Infantry (New York: Praeger Publishers, 1984), p. 205.

31. Alstair Horne, To Lose a Battle, France 1940 (Middlesex: Penguin Books, Ltd., 1969), pp. 501-507.

32. Department of the Army, Pamphlet 20-233 Historical Study, German Defense Tactics Against Russian Breakthroughs (Washington: U.S. Government Printing Office, October 1951), pp. 34-35.

33. Timothy T. Lupfer, The Dynamics of Doctrine: The Changes in German Defense Doctrine During the First World War, Leavenworth Papers Number 4, (Fort Leavenworth: Command and General Staff College, July 1981), pp. 7-8.

34. Timothy A. Wray, Standing Fast: German Defense Doctrine on the Russian Front During the Second World War, Prewar to March 1943 Research Survey Number 5 (Fort Leavenworth: Command and General Staff College, 1986), p. 69.

35. Timothy T. Lupfer, Leavenworth Paper Number 4, pp. 13-16.

36. Timothy A. Wray, Standing Fast, p. 85.

37. Ibid. p. 87.

38. Department of the Army, Field Manual 90-14, p. 2-2.

39. Department of the Army, Pamphlet 20-232 Historical Study, Airborne Operations, A German Appraisal (Washington: U.S. Government Printing Office, October 1951), p. 26.

40. Department of the Army, Field Manual 100-5, p. 15.
41. Ibid. p. 16.
42. Ibid.
43. Ibid. p. 17.
44. Timothy A Wray, Standing Fast, p. 85.
45. Carl von Clausewitz, On War, ed. and trans. by Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), pp. 390-391.
46. Sun Tzu, The Art of War, trans. by Samuel B. Griffith (London: Oxford University Press, 1971), pp. 107-108.
47. A more thorough discussion of the U.S. Army Logistic Center efforts to "up gun" combat service support units is contained in Major Brian W. Davenport, Tactical Survivability of Divisional Combat Service Support Units on the AirLand Battlefield, SAMS Monograph, (Fort Leavenworth: Command and General Staff College, 1985) pp. 18-23. That effort may be at risk as budget reductions occur and priorities change. In any event, training must go hand-in-hand with the equipment if it is to be effective.
48. For a different view on rear area command and control, see Major(P) P.A. Crosbie Command and Control of Rear Operations at Echelons Above Corps (Theater Army), SAMS Monograph, (Fort Leavenworth: Command and General Staff College, 1987). He agrees command and control procedures in the rear must be based on simplicity and unity of command, the disagreement is on how that should be accomplished. His conclusion is that a logistician (in this case, the Theater Army Area Command Commander) can not do it. This author asserts that all commanders, regardless of technical area of expertise, must be able to execute both his technical and tactical responsibilities.

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